

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 February 2002 (21.02.2002)

PCT

(10) International Publication Number  
**WO 02/13774 A3**

(51) International Patent Classification<sup>7</sup>: **A61K 7/16**,  
C01F 11/18

(74) Agent: MOMSEN, LEONARDOS & CIA.; Rua Teófilo  
Ottoni, 63 - 10th Floor, CEP-20090-080 Rio de Janeiro, RJ  
(BR).

(21) International Application Number: PCT/BR01/00101

(22) International Filing Date: 17 August 2001 (17.08.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0020183.0 17 August 2000 (17.08.2000) GB

(71) Applicant (for US only): QUÍMICA INDUSTRIAL  
BARRA DO PIRAI LTDA. [BR/BR]; Av. Vereador  
Chequer Elias, 4425, Vila Santa Helena, Barra do Pirai,  
CEP-27130-610 Rio de Janeiro, RJ (BR).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,  
SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,  
ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,  
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,  
TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COELHO, An-  
tonio, O. [PT/BR]; Rua Lauro Muller, 46, apt. 1106,  
Botafogo, CEP-22290-160 Rio de Janeiro, RJ (BR).  
VALENTE, Carlos, A., R. [BR/BR]; Rua Cervantes,  
121, apt. 101, Aterrado, Volta Redonda, CEP-27293-180  
Rio de Janeiro, RJ (BR). ANDRADE, Gustavo, P., N.  
[BR/BR]; Rua Casuarina, 135, apt. 201, Jardim Botânico,  
CEP-22261-160 Rio de Janeiro, RJ (BR). RENHA, Luiz,  
Ricardo, B., S. [BR/BR]; Av. Delfim Moreira, 350, apt.  
502, Leblon, CEP-22241-000 Rio de Janeiro, RJ (BR).

Published:

— with international search report

(88) Date of publication of the international search report:  
13 June 2002

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

WO 02/13774 A3

(54) Title: CALCIUM CARBONATE COMPOSITIONS FOR USE IN THE MANUFACTURE OF TOOTHPASTE

(57) Abstract: An aqueous suspension of particulate calcium carbonate for use in the manufacture of toothpaste compositions in-  
cludes in addition to the calcium carbonate one or more dispersing agents and one or more preservative agents and wherein the  
aqueous medium of the suspension has been treated so that the biological contamination of the suspension is not greater than the  
maximum allowable levels indicated by the US Food and Drugs Administration (FDA). The calcium carbonate may comprise a  
precipitated and/or ground calcium carbonate. The suspension may have a solids content of from 50 % to 99.5 % by weight. The  
suspension may be flowable and pumpable.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/BR 01/00101

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K7/16 C01F11/18

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data, EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 562 488 A (W. FUCHS) 31 July 1951 (1951-07-31)  claim 1; example 12	1,2,4,6, 7,11-13, 18,20, 21,25, 29-31
P,X	WO 00 69401 A (COLGATE-PALMOLIVE CO.) 23 November 2000 (2000-11-23) the whole document	1-33
X	"Vidal 1997, 73ème édition", EDITIONS DU VIDAL, PARIS, FR XP002188382  Column: "Rennie Liquide" page 1407	1-8, 11-15, 18,21-26
	-/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

19 February 2002

Date of mailing of the international search report

07/03/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

Glikman, J-F

# INTERNATIONAL SEARCH REPORT

Inter. Appl. No.

PCT/BR 01/00101

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 716 629 A (L. ROBERTSON ET AL.) 10 February 1998 (1998-02-10) the whole document -----	1-13
X	OMYA NORTH AMERICA: "Food & pharmaceutical products; Omya-Cal, FCC Food grade Calcium" INTERNET ARTICLE, 'Online! XP002188381 Retrieved from the Internet: <URL:http://www.omya-na.com/foodpharma.htm > 'retrieved on 2002-01-21! the whole document -----	1-3,5-8, 11-14, 22,23

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/BR 01/00101

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2562488	A	31-07-1951	NONE	
WO 0069401	A	23-11-2000	US 6149894 A AU 5005700 A WO 0069401 A1	21-11-2000 05-12-2000 23-11-2000
US 5716629	A	10-02-1998	NONE	

CORRECTED VERSION

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
21 February 2002 (21.02.2002)

PCT

(10) International Publication Number  
**WO 2002/013774 A3**

- (51) International Patent Classification<sup>7</sup>: **A61K 7/16**, C01F 11/18
- (21) International Application Number: **PCT/BR2001/000101**
- (22) International Filing Date: 17 August 2001 (17.08.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0020183.0 17 August 2000 (17.08.2000) GB
- (71) Applicant (for all designated States except US): **QUÍMICA INDUSTRIAL BARRA DO PIRAI LTDA.** [BR/BR]; Av. Vereador Chequer Elias, 4425, Vila Santa Helena, Barra do Piraí, CEP-27130-610 Rio de Janeiro, RJ (BR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **COELHO, Antonio, O.** [PT/BR]; Rua Lauro Muller, 46, apt. 1106, Botafogo, CEP-22290-160 Rio de Janeiro, RJ (BR). **VALENTE, Carlos, A., R.** [BR/BR]; Rua Cervantes, 121, apt. 101, Aterrado, Volta Redonda, CEP-27293-180 Rio de Janeiro, RJ (BR). **ANDRADE, Gustavo, P., N.** [BR/BR]; Rua Casuarina, 135, apt. 201, Jardim Botânico, CEP-22261-160 Rio de Janeiro, RJ (BR). **RENSA, Luiz, Ricardo, B., S.** [BR/BR]; Av. Delfim Moreira, 350, apt. 502, Leblon, CEP-22241-000 Rio de Janeiro, RJ (BR).
- (74) Agent: **MOMSEN, LEONARDOS & CIA.**; Rua Teófilo Ottoni, 63 - 10th Floor, CEP-20090-080 Rio de Janeiro, RJ (BR).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- (88) Date of publication of the international search report: 13 June 2002
- (48) Date of publication of this corrected version: 8 April 2004
- (15) Information about Correction:  
see PCT Gazette No. 15/2004 of 8 April 2004, Section II
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **CALCIUM CARBONATE COMPOSITIONS FOR USE IN THE MANUFACTURE OF TOOTHPASTE**

(57) Abstract: An aqueous suspension of particulate calcium carbonate for use in the manufacture of toothpaste compositions includes in addition to the calcium carbonate one or more dispersing agents and one or more preservative agents and wherein the aqueous medium of the suspension has been treated so that the biological contamination of the suspension is not greater than the maximum allowable levels indicated by the US Food and Drugs Administration (FDA). The calcium carbonate may comprise a precipitated and/or ground calcium carbonate. The suspension may have a solids content of from 50 % to 99.5 % by weight. The suspension may be flowable and pumpable.



WO 2002/013774 A3